



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,216	01/14/2002	Arihiro Takeda	1117.66107	5771

7590 03/17/2005

Patrick G. Burns, Esq.  
GREER, BURNS & CRAIN, LTD.  
Suite 2500  
300 South Wacker Dr.  
Chicago, IL 60606

EXAMINER

DUONG, THOI V

ART UNIT PAPER NUMBER

2871

DATE MAILED: 03/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/047,216

Applicant(s)

TAKEDA ET AL.

Examiner

Thoi V. Duong

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 8-12 and 33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-12 is/are allowed.
- 6) ☒ Claim(s) 33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This office action is in response to the Response filed January 27, 2005.

Accordingly to the amendment filed May 24, 2004, claims 8-10 and 33 were amended, and claims 1-7 and 13-32 were cancelled. Currently, claims 8-12 and 33 are pending in this application.

### ***Response to Arguments***

2. Applicant's arguments with respect to the declarations filed January 27, 2005 in the telephone interview on 02/23/2005 were persuasive; therefore, the Advisory Action is withdrawn and an interview summary is sent to Applicant on 02/24/2005. Upon further consideration, however, a new ground(s) of rejection made with respect to claim 33 is followed. Accordingly, prosecution is hereby reopened.

### ***Claim Objections***

3. Claims 9 and 11 are objected to because of the following informalities: claims 9 and 10 recite the limitation "said orientation control element" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claim 33 is rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. (Kim, USPN 6,567,144 131).

As shown in Figs. 7 and 8, Kim discloses a liquid crystal orientation method of liquid crystal molecules of a liquid crystal layer in the liquid crystal display device comprising a first substrate 200 having thereon a pixel electrode 20 and an active element TFT, a second substrate 100 having thereon an opposed electrode 10, and said liquid crystal layer interposed between said first and second substrates with said electrodes facing each other, said method comprising the step of:

giving an orientation regulating force (created by protrusion 171) to said liquid crystal molecules near an edge 19 of said pixel electrode 20 on said first substrate to counteract an orientation regulating force given by the edge of said pixel electrode to said liquid crystal molecules of said liquid crystal layer (see Fig. 5) so that said liquid crystal molecules including those near said edge are oriented in substantially the same direction, when difference in orientation direction among said liquid crystal molecules adjacent to each other near said edge is caused by said orientation regulating force (created by the protrusion 171) given to said liquid crystal molecules of said liquid

Art Unit: 2871

crystal layer due to said edge 19 of said pixel electrode 20 when voltage is being applied between said pixel and opposed electrodes (Fig. 8 and col. 7, lines 31-37); and giving an orientation regulating force (created by protrusion 27) that orients the liquid crystal molecules of said liquid crystal layer in a predetermined direction different from the directions of the orientation regulating force given by said edge of said pixel electrode to the liquid crystal molecules of said liquid crystal layer and the orientation regulating force (created by the protrusion 171) given to said liquid crystal molecules near the edge of said pixel electrode (Figs. 5 and 8).

***Allowable Subject Matter***

6. Claims 8-12 are allowed.

The following is an examiner's statement of reasons for allowance: none of the prior art of record fairly suggests or shows all of the limitations as claimed. Specifically,

Re claim 8, none of the prior art of record discloses, in combination with other limitations as claimed, a first orientation control element locally provided near an edge of the pixel electrode on the first substrate and giving an orientation regulating force to liquid crystal molecules near the edge of the pixel electrode on said first substrate, the orientation regulating force counteracting an orientation regulating force given by the edge of said pixel electrode to said liquid crystal molecules of the liquid crystal layer, so that said liquid crystal molecules including those near said edge are oriented in a substantially the same direction, when difference in orientation direction among said the liquid crystal molecules adjacent to each other near said edge is caused by the orientation regulating force given to the liquid crystal molecules of said liquid crystal

Art Unit: 2871

layer by said edge of said pixel electrode when voltage is being applied between said pixel and opposed electrodes.

The most relevant reference, USPN 6,567,144 131 of Kim et al. (Kim), fails to disclose or suggest a first orientation control element locally provided near an edge of the pixel electrode on the first substrate. As shown in Figs. 7 and 8, the Kim's reference discloses that a first orientation control element 171 provided near an edge 19 of the pixel electrode 20 is formed on the second substrate 100.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

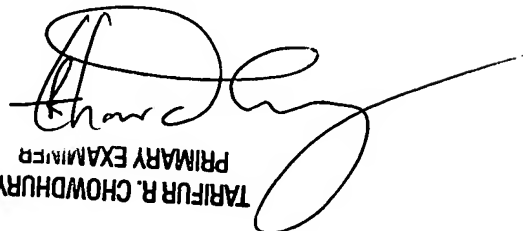
### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached at (571) 272-2293.

Thoi Duong



02/24/2005



TARIFUR R. CHOWDHURY  
PRIMARY EXAMINER